What is claimed is:

1. A method for the detection and evaluation of the light generated in a fluorescing specimen by a short pulse laser, comprising the steps of:

separately irradiating at least a first and a second fluorophore and/or a self-fluorescing specimen with different wavelengths;

recording specimen light in a wavelength-dependent manner with at least one nondescanned detector as reference spectrum; and

carrying out a separation into individual spectra during the irradiation of at least two fluorophores and/or self-fluorescing specimens simultaneously from the measured spectrum and the reference spectra through regression analysis .

2. The method according to claim 1, wherein the wavelength of the short pulse laser is changed continuously in at least one wavelength region.

3. The method according to claim 1, wherein at least a part of the specimen is scanned and a fluorescence image of the specimen or of a portion of the specimen is detected and stored for the respective adjusted wavelength.